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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/583,654 05/30/00 AHLGREN

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EXAMINER

TARAZANO, D

ART UNIT

PAPER NUMBER

1773

DATE MAILED:

10/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/583,654

Applicant(s)

AHLGREN ET AL.

Examiner

D. Lawrence Tarazano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-5 and 7-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-5, 7-14 and 20-26 is/are rejected.
- 7) ☒ Claim(s) 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3-5, 7-10, 12-14, 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. (4,532,189) in view of Lai et al. (5,272,236).

Mueller et al. teach heat shrinkable multi-layer films comprising LLDPE, wherein DOWLEX 2054 is a commercially available LLDPE (examples I, II, and III). Moreover, example II shows LLDPE blended with ethylene vinyl acetate used in the core layer of a multilayer film. Furthermore, these films have improved optical properties (column 1, lines 13+). The films are also cross-linked to improve the abuse resistance of the structures (column 2, lines 18+), and the films have shrink rates within the claimed range. However, they fail to teach substantially linear polyethylene having long chain branching.

Lai et al. teach a substantially linear polyethylene having long chain branching that has superior properties to conventional polyethylenes. Lai et al. compare one commercially available LLDPE material, DOWLEX 2054, to the polymers of their invention (see examples 7-9). Lai et al. state that the polymers of their invention are superior to conventional polyethylene polymers in terms of gloss, haze, and clarity (see examples 10-13). Lai et al. further suggest that

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resins of their invention would be useful in the production of films (column 20, lines 48+) and useful in blends (column 14, lines 10-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used substantially linear olefin polymers of the type taught by Lai et al. in place of the LLDPE, used in the films taught by Mueller, in order to produce a film having higher gloss, lower haze, and better clarity which could be more easily produced.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the orientation temperature of the films depending on desired temperature of shrinkage since the temperature of orientation would be directly related to the temperature at which shrinkage occurs.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have increased the thickness of the films for use in applications in which a thicker stronger film was desired.

2. Claims 1, 3, 7-10, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Newsome et al. (4,615,922) in view of Lai et al. (5,272,236).

Newsome et al. teach oriented films comprising surface layers comprising linear low density polyethylene and a core layer comprising barrier materials such as EVOH; however, they fail to teach substantially linear polyethylene having long chain branching.

Lai et al. teach a substantially linear polyethylene having long chain branching that has superior properties to conventional polyethylenes as discussed above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used substantially linear olefin polymers of the type taught by Lai et al. in

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place of the LLDPE, used in the films taught by Newsome et al., in order to produce a film having higher gloss, lower haze, and better clarity which could be more easily produced.

3. Claims 1, 3, 7-10, 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai et al. (5,272,236) in view of Baird Jr. et al. (3,022,543).

Lai et al. teach blown films as discussed above. While Lai et al. patent teach blown films, they do not specifically teach the production of blown shrinkable films.

Baird Jr. et al. teach methods of producing shrinkable polyethylene films by blown bubble techniques. Packaging films, which are shrinkable, result in tight fitting packaging. This eliminates the dead space around the article, eliminates wrinkles, and improves the overall appearance of the package (column 1)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the orientation methods taught by Baird Jr. et al. to orient the ethylene / alpha-olefin (polyethylene) films taught by either Lai et al. so as to produce shrinkable polyethylene films useful in packing applications which would have improved appearance and be better covering packages.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the orientation temperature of the films depending on desired temperature of shrinkage since the temperature of orientation would be directly related to the temperature at which shrinkage occurs.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have increased the thickness of the films for use in applications in which a thicker stronger film was desired.

Allowable Subject Matter

1. Claims 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applicants claim multilayer films having at least 4 layers, comprising a variety of specific components. Newsome et al. (4,615,922), the closest prior art, teaches analogous structures; however, the layered structure is different, and there is no motivation to manipulate the materials to produce films having the claimed structure.

Response to Arguments

Applicant's arguments filed 5-29-01 have been fully considered but they are not persuasive. The applicants contend that there were logistical problems with forming films from single site catalyzed polyethylene materials, and that going from LLDPE to the single site

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catalyzed materials is not mere substitution of one material for another. The examiner notes that the branching in the materials taught by Lai et al. give them improved processibility, and Lai et al. give clear indications that they mean for these materials to substitute LLDPE. There are two types of single site catalyzed polyethylene materials, ones that are linear and have no branching and those of the type claimed which have long chain branching. The instant claims are directed to the latter, and Lai et al. gives no indication that there are any types of process problems in fact they discuss the advantages of using such materials.

The applicants state that they have unexpected results for the use of the substantially linear polyethylene materials. While the films show some improvements, the examiner takes the position that this is not unexpected. First, table VIII in Lai et al. clearly show improved gloss, dart impact and clarity from using the substantially linear polyethylene materials. The applicants state that they have improved shrinkage rates. The examiner takes the position that since the materials taught by Lai et al. have lower melting points, they can be oriented at lower temperatures so they have improved shrinkage rates at lower temperatures. It is well known in the art that the temperature of orientation is directly related to the temperature at which a material shrinks.

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Lawrence Tarazano whose telephone number is (703)-308-2379. The examiner can normally be reached on 8:30 to 6:00 (off every other Friday)).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on (703)-309-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.

D. Lawrence Tarazano
Examiner
Art Unit 1773

dlt
October 22, 2001



Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700